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10/826,842

04/15/2004

Kunal Mukerjee

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EXAMINER

THOMAS, MIA M

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

04/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/826,842 | Applicant(s) MUKERJEE, KUNAL | |
| | Examiner Mia M. Thomas | Art Unit 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/03/05; 06/13/05</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to applicant's remarks received on 23 February 2009. Claims 1, 2, and 5-21 are pending in the application. Claims 1, 2, and 5-21 are rejected. No claims have been allowed. Claims 1, 10, 14, 18, and 20 are independent. Claims 1, 10, 14, 18, and 20 have been amended.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-2, 5-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is with specific regards to the term

"closer to optimal" as recited at line 6 of claim 1;

"more closely match" as recited at line 10 of claim 10;

"closest to an optimal" at line 8 and "sufficiently close to" at line 9 of Claim 14;

"sufficiently close" at line 10; "sufficiency threshold" at line 11; "closet to optimal" at line 16 at claim 18; and

"closet to optimal" at line 8; "sufficiently close to" at line 12; and "sufficiency threshold" at line 13; of claim 20.

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The Examiner has analyzed these claims such that the aforementioned claimed limitation(s) has/have insufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention, specifically based upon a "sufficiency threshold" or "sufficiently close to" (re: distribution and application). It appears to the Examiner that since a "sufficient" subjectivity would lead the skilled artisan to the desired result, the Examiner is unclear as to how the instant disclosure would lead the skilled artisan to determine the DPCM prediction mode for application. It is also clear to the Examiner that the instant application need not teach and preferably omits what is well known in the art, however, the instant disclosure does not provide a reasonable level of detail with regards the levels of optimal coding, sufficiency standards and sufficiency thresholds to code the macro-blocks and the DPCM mode for the macroblock onto which the encoding/decoding is being performed. The skilled artisan would be able to predict the outcome of "outputting encoded DPCM residuals in a bitstream (as recited at independent claim 1) and similarly for claims 1, 10, 14, 18 and 20, RLGR (run-length, Golomb-Rice coding) encoding or decoding DPCM residuals. What is unclear to the Examiner is the "sufficiency" requirement that allows the skilled artisan to predict a "closer to optimal" or "more closely matched to optimal" or "sufficiently close to optimal" prediction when the instant disclosure does not fully identify the direction of the selection of multiple available differential pulse code modulation prediction modes. The Examiner would like to note that the best determination of a DPCM mode is found at page 8 of the instant specification, lines 2-11 which describe an example of when a DPCM mode element that discussed the best coding performance when its input values have a zero-biased, two-sided Laplacian distribution. Further at page 9, line 17-28, the instant application describes an "ideal distribution for RLGR entropy encoding and a modulator that checks for sufficiency relative to the ideal zero-biased, two-sided Laplacian distribution. The Examiner is stating that the instant

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specification does not provide a full, clear and concise manner/process to which the skilled artisan would be able to predict these results without the necessary experimentation for example with regards to the relative claim language such as a "sufficiency threshold". Appropriate correction/clarification is required for proper claim analysis.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

5. Claims 14-17 are under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 14-17 are drawn to functional descriptive material recorded on a computer readable storage medium. Normally, the claim would be statutory. However, the specification, at page 14, lines 9-16 defines the claimed computer readable medium as encompassing statutory media such as a "ROM", "hard drive", "optical drive", etc, as

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well as ***non-statutory*** subject matter such as a “signal”. Refer to “a modulated data signal” and “electrical, optical, RF...or other carrier.” at page 9.

A “signal” embodying functional descriptive material is neither a process nor a product (i.e., a tangible “thing”) and therefore does not fall within one of the four statutory classes of § 101. Rather, “signal” is a form of energy, in the absence of any physical structure or tangible material.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to include the disclosed tangible computer readable media, while at the same time excluding the intangible media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure. Appropriate correction/clarification is required for proper claim analysis.

Response to Arguments

6. A response to applicant's remarks follows here below.

Summary: Applicant requests the Examiner provide an initialed copy of the Form 1449.

Examiner's Response: The Examiner has gladly provided the applicant with an additional (new) initialed copy of the Form 1449, considering all documents made of record by the applicant.

Summary: Regarding Claim 1-9 at pages 9-11 of applicant's remarks; Because Merhav, Sudharsanan, and Kajiwara, whether considered separately or in combination with each other, do not teach or suggest each and every element of amended claim 1, claim 1 is allowable over Merhav, Sudharsanan, and Kajiwara. Dependent claim 9 is allowable at least because it depends from allowable amended claim 1. Applicants respectfully request withdrawal of the § 103 (a) rejections and allowance of claims 1 and 9.

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Examiner's Response: The Examiner respectfully disagrees. Based upon the newly forwarded 112, first paragraph rejection, claims 1 and 9 stand rejected.

Summary: Regarding Claims 2, 5 and 6 at pages 11 and 12 of applicant's remarks, Dependent claims 2, 5, and 6 are allowable at least because they depend from allowable amended claim 1. Applicants respectfully request withdrawal of the § 103(a) rejections and allowance of dependent claims 2, 5, and 6.

Examiner's Response: The Examiner respectfully disagrees. Based upon the newly forwarded 112, first paragraph rejection, claims 2, 5, and 6 stand rejected.

Summary: Regarding Claim 7,8 (at page 12); claims 10-13 (at page 13-14); claims 14-17 (at page 15-17) and claims 18-21 (at pages 18-19), applicant respectfully request the withdrawal of the § 103 (a)rejections and allowance of the aforementioned claims.

Examiner's Response: The Examiner respectfully disagrees. Based upon the newly forwarded 112, first paragraph rejection, claims 7,8,10-13,14-17,18-21 stand rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mia M. Thomas whose telephone number is (571)270-1583. The examiner can normally be reached on Monday-Thursday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew W Johns/
Primary Examiner, Art Unit 2624

/Mia M Thomas/
Examiner, Art Unit 2624